

REMARKS/ARGUMENTS

The office action of February 3, 2009 has been carefully reviewed and these remarks are responsive thereto. Reconsideration and allowance of the instant application are respectfully requested.

Objection to the Claims

Claims 21, 32, and 42 stand objected to for reciting proper names. Claim 21 has been amended to delete the proper names, and new dependent claim 47 has been added to recite the names.

The Office Action holds the opinion that terms “Taiji”, “Yixue” and “Gua” cannot be understood by an ordinary person skilled in the art in the United States. This standard is improper and the terms “Taiji”, “Yixue” and “Gua” are clear to one skilled in the art of Chinese architecture:

(1) A person skilled in the art should be an imaginary person who is not limited by nationalities and should understand all common terms in the relevant art including terms used in the United States as well as terms used in other countries. The terms “Taiji”, “Yixue” and “Gua” are well known technical terms in the art of Chinese architecture and are extremely common in China. In this case, one skilled in the art would include one who understands such common terms regardless of whether they reside in the US, China, or anywhere else;

(2) As evidenced in part by the definitions provided with the previous response, these terms have meanings which are clearly known by a person skilled in the art of Chinese architecture and are readily available to others that may not be familiar with the terms;

(3) The specification of the present application provides examples of these terms as used for Chinese architecture. Furthermore, as one skilled in the art would recognize, the types of structures are identified/shown in the drawings of the specification. Attention is drawn to the description of Fig. 9 in the present specification. This passage explains the principles regarding “Taiji”, “Yixue” and “Gua”. Those having skill in the art of these types of Chinese architectural would readily understand the use of these terms as applied to the architecture of the instant claims. Withdrawal of this objection is requested.

Rejection under 35 U.S.C. § 112, Second Paragraph

Claims 26, 30, 32-37, 39, 41, and 44-46 stand rejected as indefinite as depending on claim 21 which recites, for example, “one, several, or more buildings.” The claims have been amended to clarify the number of buildings and provide proper dependent claim language. Withdrawal of this rejection is requested.

Claims 21-46 stand rejected as indefinite for being replete with alternative language. The claims have been amended to address this rejection. Withdrawal of this rejection is requested.

Rejection under 35 U.S.C. § 101

Claims 21-46 stand rejected under 35 USC 101 as the claimed invention is directed to non-statutory subject matter. This rejection is respectfully traversed.

The claims are directed to actual structural architecture which may contain some natural elements therein. Applicants are not claiming natural elements per se, but only natural elements as they fit into the multifunctional tridimensional combined ecological architecture of the instant claims. The claims require physical structures such as buildings and water systems but the architecture allows for natural areas within the architecture. Thus the present rejection is improper and withdrawal is requested.

Rejections under 35 U.S.C. §§ 102 and 103

Claims 21-22, 32, and 42-43 stand rejected under 35 USC 102 (b) as anticipated by Whitaker, *Agriculture Buildings and Structures*.

Whitaker does not teach each and every element of the instant claims as combined together in a three-dimensional architecture. Hence Whitaker cannot anticipate the instant claims.

Humans are being confronted with more and more serious problems of shortage of land and resources, environment pollution, and bad residential environments. Industrialization advances the progress of society, but also uses up valuable resources and causes environmental concerns. Contradictions between industrialization and shortage of resources and environment pollution are becoming increasingly conspicuous. The current production and residential manner cannot solve said contradictions.

The present inventor considered these serious problems and developed a system to help solve these problems. The technical solution of the present invention is defined in claim 21. Claim 21 defines a **multifunctional tridimensional combined ecological architecture**, having at least one building, comprising: **an ecological structure for organisms, a natural ecological structure, a place for human culture activity, an organism production system, cooperating systems**, wherein **said at least one building have a tridimensional structure**, and include an aboveground part, an underground part, or both, wherein a top roof, side(s), or both of said at least one building are partly or completely transparent, openable and closable, or both; wherein **said natural ecological structure and said ecological structure for organisms are provided anywhere in or on said at least one building, and include plants, animals, a water resource and human cultural sights therein; said organism production system comprises cultivation devices, processing devices, storing and transferring devices and marketing devices; said cooperating systems comprise at least a part of a water recycling system, an electrical system, a ventilation system, a temperature and humidity regulating system, a light transmitting system, a methane system, an illumination system and a control system; said at least one building and the systems are combined in a manner of part or complete combination.**

It can be seen that claim 21 defines that the multifunctional tridimensional combined ecological architecture of the present invention has at least one building, i.e. has one or a plurality of buildings. As for the multifunctional tridimensional combined ecological architecture, no matter whether the multifunctional tridimensional combined ecological architecture comprises one building or comprises a plurality of buildings, it should include **an ecological structure for organisms, a natural ecological structure, a place for human culture activity, an organism production system, cooperating systems; said building or buildings comprised in the multifunctional tridimensional combined ecological architecture has/have a tridimensional structure; said natural ecological structure and said ecological structure for organisms are provided inside or on said building or buildings, and include plants, animals, a water resource and human cultural sights therein; and said organism production system comprises cultivation devices, processing devices, storing and transferring devices and marketing devices.**

The **combined ecological** architecture including the boldfaced technical features is not disclosed in the prior art, which reflects the new and inventive concept of the present invention. It

can be seen that in the building(s) in the multifunctional tridimensional ecological architecture of the present invention, the living and residential environment of human, the production (producing, processing, transferring, storing and marketing of plants and animals) environment and the organism growth environment are combined together and incorporated into one building or a plurality of combined buildings.

One of the inventive features of the present claims is combining the ecological environment, formed by combining a natural ecological structure and an organism ecological structure, the organism production system, and the place for human culture activity for human cultural activities (for example, a dwelling) with the cooperating system to form a **multifunctional tridimensional combined ecological architecture**. Such an inventive concept is not disclosed in the prior art, and no technical teaching is provided in the prior art. Making use of the concept of the present invention defined in claim 21, i.e. the multifunctional tridimensional combined ecological architecture, human can realize objects of residence, production and organism growth within one building or a plurality of combined buildings and can provide a human labor and human inhabitation integrated living manner which protects environments. Accordingly, the following beneficial effects will be produced:

(1) incorporating organism production environment (such as ponds, rivers and land) into the tridimensional building/buildings so as to make the organism production environment develop tridimensionally, which solves the problem of shortage of land and resources caused by traditional organism production environment with an extending plane, and the multifunctional tridimensional ecological architecture of the present invention can provide more abundant organism products;

(2) making the living environment of human and the green environment of nature be closer or be fused together, forming an architecture structure that realizes the harmonization of human with nature, so as to make people feel and appreciate beauty of nature environments at any moment and avoid the problem that people are increasingly nervous as keeping far away from nature due to industrialization and urbanization, and the multifunctional tridimensional ecological architecture of the present invention, which makes people live in nature, has prominent function of protecting human health;

(3) after the natural ecological environment, residential environment of human being, production environment and the organism growth environment are combined into the building(s), environments can be protected by fully making use of natural organisms so as to solve the

problems of air pollution or other environmental pollutions, effectively reduce atmosphere greenhouse effect and play a significant role of protecting environments, protecting human being, protecting diversification of organisms and protecting the earth;

(4) people do not have to spend much time on their way to the working places, due to the working places being located in the building of the multifunctional tridimensional ecological architecture, which can decrease people's journeys by vehicles and the waste gas discharge by vehicles;

(5) in the multifunctional tridimensional ecological architecture, circularly making use of resources (such as water) can be realized, methane applied for the building(s) can be produced by dealing with waste, and green energies (such as wind power and solar energy) can be fully made use of. Actually, a small society which can satisfy itself can be realized by the multifunctional tridimensional ecological architecture per se, in which people can live and develop healthily without going out.

Whitaker, *Agriculture Buildings and Structures*, mainly include two parts: the first part respectively mentions design of agriculture buildings and materials applied for the agriculture buildings; and the second part mentions housing for specific enterprises. The first part includes 17 chapters, wherein chapters 1-3 are directed to planning and design of agriculture buildings; chapters 4-8 are directed to introductions of building materials; chapters 9-13 relate to structure designs; chapters 14-16 relate to heat transfer, solar energy, air, moisture, temperature relationships and ventilation and chapter 17 relates to construction cost estimation. Chapters 18-24 of the second part respectively concern housing for dairy cattle, housing for livestock, poultry housing, greenhouse, fruit, vegetable, and nursery storage, grain storages, silos, and hay storages, and machinery sheds, farm shops and fencing.

It can be seen that as a whole, this is a traditional look at the design of agriculture buildings, and the contents from respective aspects which should be considered when designing agriculture buildings are mentioned therein. However, Whitaker does not teach to combine agricultural buildings applied to respective specific uses into a tridimensional architecture as claimed. Whitaker neither discloses the boldfaced technical features in claim 21, nor provides the teaching for forming a **multifunctional tridimensional combined ecological architecture** by combining the ecological environment, formed by combining a natural ecological structure and an organism ecological structure, the organism production (producing, processing, storing and marketing of

plants and animals) system, and the place for human culture activity for human cultural activities (for example, a dwelling) with the cooperating systems (for example a methane system).

Whitaker only mentions agricultural buildings and structures each with a single function. For instance, a barn is mentioned on pages 6-9, and greenhouses are mentioned in chapter 21. It can be understood that the barn is applied for storing grains, and greenhouses are applied for planting crops (see lines 10-11 on page 452). Whitaker does not teach or suggest realizing multi-functions such as storing grains, planting plants, raising animals, processing products such as plants, animals, etc., transferring, marketing, making use of methane and human inhabitation, etc.

In addition, Whitaker merely mentions several agricultural buildings and structures each with a single function, wherein the disclosed agricultural buildings can only be applied in rural areas. On the contrary, the multifunctional tridimensional combined ecological architecture defined in claim 21 applies not only for agricultural construction but also for construction of cities due to its specific structures and components. It provides a totally new architecture to the human society, which not only meets the requirement of human cultural activities (for example, inhabitation) but also meets the requirement of carrying out production to provides food to humans. It can also protect ecological environment, save energy, and protect humans themselves and have multiple functions. It provides a totally new life style and tridimensional ecological environment for humans. The multifunctional tridimensional combined ecological architecture also can be built in desert due to its structures and components, to make the desert to become an oasis by concentrating human life, organism production, processing and marketing into a tridimensional architecture after such buildings are built in desert.

An important point is that the object of Whitaker is totally different from and cannot be compared with the purpose of the multifunctional tridimensional combined ecological architecture as claimed in claim 21. Whitaker aims at teaching a person skilled in the art to design various types of agricultural buildings according traditional modes. The purpose of the present invention intends to solve the problems of reducing of farming land, shortage of resources, damages suffered by the earth with the process of industrialization, greenhouse effect and the increasingly deteriorated environments which problems human is confronting. What is more, the purpose is realized through the multifunctional tridimensional combined ecological architecture defined in

claim 21, especially by concentrating human life, organism production, processing and marketing into a tridimensional architecture.

Furthermore, as mentioned in the technical features “said a plurality of buildings comprises at least one of ecological structures of Taiji graphics type, Eight Gua graphics type, or both, hood type, frame hood type, tree frame type, tridimensional land type, tridimensional warm house type, combined frames type, turret frame type, combined passage type, hacienda type, ecological village type, ecological town type, tridimensional ecological river type, tridimensional ecological bridge type, tridimensional ecological road type and tridimensional ecological wall type” defined in claim 47, when any one form therein is adopted in the plurality of building of the present invention, ecological effects can be brought about. Each of these claimed elements can form part of the multifunctional tridimensional combined ecological architecture. Consequently, when combining these elements, the multifunctional tridimensional combined ecological architecture according to the present invention may form an ecological city or town, etc. with an ecological system. Whitaker’s *Agriculture Buildings and Structures* does not disclose the structures of these ecological structures either.

Whitaker does not teach or suggest the elements and combination disclosed in claim 21. It is noted that although claim 21 is rejected under 35 USC 102, two patent documents were also cited which is improper.

Claim 23 further defines water recycling system, electrical system, ventilation system, temperature and humidity regulating system, light transmitting system, methane system, control system and the place for human culture activity. The architecture formed by combining all these systems, organism production system, production structures of plants and animals, product processing, transferring and marketing and the place for human culture activity is not disclosed in Whitaker.

Claim 33 further defines the present invention as that the buildings are combinable in at least one of various types of forms, which is not disclosed by Whitaker.

Claim 43 further defines the structure forms of the ecological structure for organisms and the natural ecological structure according to claim 21. The inventive concept of combining any one of the ecological structures with the place for human culture activity, production environments of animals and plants, product processing, transferring and marketing environment is not disclosed in

Whitaker. It can be seen from the description of the instant application that said ecological structures are inventive elements of the present invention which have functions of increasing land supply, protecting environments and combining the human residential environment with the ecological environment, organism growth environment and the production environment so as to realize the harmonization of human with nature.

Claim 44 defines a plurality of places for human culture activity. The inventive concept of combining the places for human culture activity with the ecological structure for organisms, natural ecological structure, production environments of plants and animals, product processing, transferring, storing and marketing into a building is not disclosed in Whitaker.

Whitaker does not teach each and every element of the instant claims as discussed above. Hence Whitaker cannot anticipate the instant claims. Withdrawal of this rejection is requested.

Claims 23-31, 33-41, and 44-46 stand rejected under 35 USC 103(a) as unpatentable over Whitaker. This rejection is respectfully traversed.

As discussed above, Whitker does not teach or suggest the elements of claim 21. Thus, dependent claims which depend on claim 21 are further not taught or suggested by Whitaker for the same reasons..

The Office Action considers it to be old and well known to use each of the systems and devices claimed by applicant in both combination and as a stand alone functioning unit. College campuses, farms and plantations are mentioned, and the Office Action considers that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have installed in and around a system of buildings each of these well-known devices and systems. Moreover, the Office Action considers that the motivation to combine each of these systems would have been to form a sustainable location that meets all of a community's needs. These positions are traversed.

The object of the present invention is solving the problems of shortage of land and resources and deterioration of environments, which are serious problems concerning the whole human race, other than simple problems of meeting the needs of the community. In order to solve these problems, the present inventor provides the multifunctional tridimensional combined ecological architecture, in which one building comprises a place for human culture activity, an ecological structure for organisms, a natural ecological structure, product processing, storing,

transferring and marketing places. All these structures are designed for solving the above-mentioned problem and can solve these problems. The prior art does not teach or suggest such an inventive concept.

College campuses, farms, and plantations do not give suggestion of the characteristics of the invention claimed in claim 21: combination, multiple-function (for instance living and production), ecology and tridimension. Moreover, as defined in claim 21, the building or buildings have a tridimensional structure, which provides conditions for reaching multiple developments of an organism production system, natural ecological structure and an ecological structure for organisms in the tridimensional architecture, and improves the current situation of merely farming one layer of land in the greenhouse so as to upgrade the farming land to multiple layers of land, which make effectively solve the problem of the reducing of the farm land be possible. Whitaker, college campuses, farms, and plantations do not teach or suggest the combination of elements as defined in the instant claims. Withdrawal of this rejection is requested.

Further comments

In paragraph 13, the Office Action considers that chapter 3 of Whitaker does address the arrangement of buildings on a farm site as shown by the table of contents, believes that Whitaker does teach tridimensional buildings having length, width and height, and in the opinion that Whitaker teaches combining them into a collective unit of buildings.

It is noted that chapter 3 of Whitaker merely mentions “Farmstead Planning, 21”, “Selecting a Site, 22”, “Building Arrangement”, “Drives, Turnarounds, and Parking Areas, 27”, “Yard Lighting, 27”, “Wind and Snow Control, 27”, “Problems, 31” and “References, 31” and does not disclose the actual content of how to arrange a plurality of buildings. Even if Whitaker addresses combining the buildings, it combines buildings each having a single function other than combining buildings having various functions of the present invention for forming a multifunctional combined architecture. Moreover, Whitaker neither mentions the problems to be solved in the present invention nor provides any teaching or suggestion for obtaining the technical means for solving the problem of the present invention. Moreover, in the multifunctional tridimensional combined ecological architecture defined in claim 21, a building comprises a place for human culture activity, an ecological structure for organisms, a natural ecological structure, organism growth structure, plants, animals, water source, artificial views, organism production

and processing and marketing structures. Moreover, Whitaker does not provide the teaching for applying the ecological structure for organisms (wherein plants, animals, water source and artificial views are comprised) to the buildings in which human lives.

In paragraph 14, the Office Action considers that a recitation with respect to the manner in which a claimed apparatus is to be employed does not differentiate the claimed apparatus from a prior art apparatus. However, claim 21 defines actual elements required, for instance, even if there is only one building, it is required that a place for human culture activity, an ecological structure for organisms, a natural ecological structure, organism growth structure, plants, animals, water source and artificial views, organism production and processing and marketing structures are comprised. Whitaker does not teach or suggest this specific combination of elements.

In paragraph 15, the Office Action considers that claims in a pending application should be given their broadest reasonable interpretation and that the invention as claimed is combining various types of buildings, devices, and systems into an ecological architecture. “Architecture” constitutes buildings collectively. Thus, both a college campus and a farm teach multifunctional tridimensional combined ecological architectures having one or more buildings as claimed by applicant. Applicant traverses this position.

As discussed above, claim 21 is directed to a multifunctional tridimensional combined ecological architecture designed for solving the problems of shortage of land and resources, deterioration of human living environment, in which architecture a plurality of buildings are associated with each other and form an indispensable part of the integral building and comprise a place for human culture activity, an ecological structure for organisms, a natural ecological structure, organism growth structure, plants, animals, water source and artificial views, organism production and processing and marketing structures.. In addition, in the multifunctional tridimensional combined ecological architecture, water recycling, electricity, methane energy supplies are realized so as to form a living environment that can support itself.

Applicant believes that the current traditional campuses and farms cannot be compared with the multifunctional tridimensional combined ecological architecture of the present invention. What is more, amended claim 21 recites a place for human culture activity, an ecological structure for organisms, a natural ecological structure, organism growth structure, plants, animals, water source, artificial vies, organism production, processing and marketing structures and supply systems for water recycling system, electricity power and methane energy, which are important

features of the present invention. The combination of these features is not taught or suggested by any prior art, current college campus, or farm. Furthermore, as mentioned in claim 21, said natural ecological structure and said ecological structure for organism are provided in or on said building or buildings, and the traditional campuses and farms do not teach or suggest this feature either.

Humans live in an earth supported by ecological environments. Thus, the ecological environments determine whether humans can continue to develop. The harmony development of ecological environment and human will allow continued human development. However, the current worldwide ecological environment has been seriously damaged, resulting in severe natural disasters. If not restrained, natural ecological disasters will result which will lead to the collapse and extinguishment of biological chains. Moreover, construction of buildings damages the ecological environment, worsens the greenhouse effect, and threatens the sustainable development of human, etc. Furthermore, oxygen bars (such as tropical rain forests) for organisms are damaged seriously by humans, such that the oxygen contained in the air is reduced to a half over the decades. Humans and other organisms live in the ecological environments lacking oxygen, which seriously influences the evolution and development of organisms (including human). Over-exploring mines, coal mine, petroleum etc. worsen damages to the ecological environment, resulting in energy crises so as to threaten the development of human. The farm reclamation not only damages ecological environment seriously but also results in food shortage, starvation and death due to the land is not enough for raising the human in the earth.

It can be seen that if the above-mentioned crises are not overcome, sustainable development cannot be realized. The “agricultural buildings” of Whitaker are merely a part of traditional human life and construction of buildings, and do not have the function of protecting environments. “Campuses” and “farms” are merely further developments of human’s construction of buildings and have no function of protecting environments. The construction of “campuses” and “farms” and the construction of the “multifunctional tridimensional combined ecological architecture” defined in claim 21 have completely different ecological objects. The former is traditional and will result in damages to the ecological environments, and the latter aims at protecting ecological environments.

Humans contribute to and are being confronted by damage to the ecological environment, shortages of resources, food crisis, rising of sea levels and shortages of living spaces, etc. The “agricultures”, “campuses” and “farms” cannot solve the above-mentioned problems. Campus,

farms have their respective single functions and develop in the two-dimensional manner. In fact, as more “agriculture buildings,” “campuses,” and “farms” are constructed, more resources are consumed, and more damage to the environment occurs. On the contrary, the multifunctional tridimensional combined ecological architecture can effectively solve the above-mentioned problems and save human from numbers of disasters.

As more tridimensional architectures according to claim 21 are constructed, the better ecological environment and human will be protected. The claimed invention provides for a totally new living manner that can confront natural disasters and form an ecological environment unaffected by other environments. The tridimensional ecological feature could even protect human and be adopted by human in outer space or on the moon. The tridimensional architecture can take up less space and use fewer resources than traditional systems of farming and building. For example, current farming traditions use up land and increase waste.

The tridimensional architecture further solves problems of transportation and ecology under bad environments such as in desert; and tridimensional ecological rivers, tridimensional ecological walls, tridimensional ecological roads, which contribute tridimensional ecological environments for protecting humans, protecting environments and providing organism products, provides beneficial conditions for enriching products, wherein the ecological rivers can protect water sources of humans by its recycling water. The ecological disasters have already caused famine of water in many places in the world which not only destroys organisms but also leads to unrest in the world. Water in the ecological rivers can be recycled and can provide abundant products. When famine of water happens, the restored water therein can help users of the ecological villages and towns to avoid disasters. Its power system can assure power supply by itself under the circumstance that no outer power supply is available, and the both of them are endless green energy.

In paragraph 16, the Office Action mentions that by the applicant’s own admission, the large scale of complex ecological architecture according to the present invention is a systematic invention. These features are disclosed by Whitaker as well as by the systematic structure of college campuses and farms throughout the world. Applicant respectfully traverses this position.

Whitaker does not teach the multiple-functional combination and the tridimensional development and the plurality of parts of the claimed invention such as place for human culture activity, an ecological structure for organisms, a natural ecological structure, organism growth

structure, plants, animals, water source, artificial vies, organism production, processing and marketing structures and supply systems for water recycling system, electricity power and methane energy. Traditional college campuses and farms do not remedy the defects of Whitaker.

Withdrawal of the rejections over Whitaker is respectfully requested.

CONCLUSION

It is believed that no fee is required for this submission. If any fees are required or if an overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No. 19-0733, accordingly.

All rejections having been addressed, applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,
BANNER & WITCOFF, LTD.

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